

## AMENDMENTS TO THE CLAIMS

Please replace the pending claims with the following claim listing:

1-50. **(Canceled)**

51. **(Currently Amended)** A method of decontaminating an enclosed space, the method comprising the steps of:

positioning an apparatus within an enclosed space having an atmosphere, the apparatus including a structure at least partially bounding a compartment, the structure having a plurality of spaced apart openings that communicate between the compartment and the atmosphere within the enclosed space, a flash evaporator chamber being disposed within the compartment of the structure, the flash evaporator chamber having an exterior surface that is freely exposed to the atmosphere within the enclosed space by way of the plurality of spaced apart openings;

creating a recirculating heated airstream within [[an]] the enclosed space by the apparatus performing the following:

(i) continuously drawing air from [[an]] the atmosphere within the enclosed space to form an air stream,

(ii) heating the airstream while in the enclosed space, and

(iii) emitting the heated airstream back into the atmosphere within the enclosed space; and

progressively introducing hydrogen peroxide/water vapour into the recirculating heated airstream until the atmosphere within the enclosed space reaches a dew point that causes the hydrogen peroxide/water vapour within the atmosphere to simultaneously and continuously condense onto substantially all exposed surfaces bounding or within the enclosed space so as to decontaminate the surfaces, the hydrogen peroxide/water vapour passing through the plurality of openings of the structure to condense on the exterior surface of the flash evaporation chamber, the hydrogen peroxide/water vapour being produced by flash evaporating within the enclosed space an flash evaporator chamber the aqueous solution of hydrogen peroxide, the steps of creating a recirculating heated airstream and step of

progressively introducing hydrogen peroxide/water vapour into the recirculating heated airstream being performed by [[an]] the apparatus that is disposed within the enclosed space.

52. **(Previously Presented)** The method as claimed in claim 51, further comprising removing the hydrogen peroxide from the enclosed space after the dew point has been reached and the hydrogen peroxide/water vapour has condensed on the surfaces.

53. **(Previously Presented)** The method as claimed in claim 52, further comprising:  
measuring the condensation of the hydrogen peroxide/water vapour on the surfaces by a monitor; and

terminating the step of introducing hydrogen peroxide/water vapour into the recirculating heated airstream when the measured condensation has reached a predefined level.

54. **(Previously Presented)** The method as claimed in claim 52, further comprising measuring the condensation in the enclosed space at a number of different locations by condensation monitors to ensure that condensation has taken place throughout the enclosed space.

55. **(Previously Presented)** The method as claimed in claim 51, further comprising terminating the step of introducing hydrogen peroxide/water vapour into the recirculating heated airstream when a predetermined concentration of hydrogen peroxide/water vapour in the atmosphere has been reached.

56. **(Previously Presented)** The method as claimed in claim 55, further comprising:  
using biological indicators in the enclosed space to determine when the predetermined concentration of hydrogen peroxide/water vapour in the atmosphere has been reached; and  
removing the hydrogen peroxide from the enclosed space after the hydrogen peroxide/water vapour has reached the predetermined concentration.

57. **(Previously Presented)** The method as claimed in claim 51, further comprising delivering the heated airstream carrying the hydrogen peroxide/water vapour as a jet within the enclosed space.

58. **(Previously Presented)** The method as claimed in claim 57, further comprising delivering the heated airstream carrying the hydrogen peroxide/water vapour in a universally rotating jet to distribute the hydrogen peroxide/water vapour throughout the enclosed space.

59. **(Previously Presented)** The method as claimed in claim 51, further comprising using one or more fans within the enclosed space to disperse the hydrogen peroxide/water vapour throughout the enclosed space.

60. **(Previously Presented)** The method as claimed in claim 51, wherein the aqueous solution of hydrogen peroxide from which the hydrogen peroxide/water vapour is produced contains 30 to 35% hydrogen peroxide and a balance of water.

61. **(Withdrawn)** The method as claimed in claim 51, wherein the hydrogen peroxide/water vapour further comprises peracetic acid.

62. **(Withdrawn)** The method as claimed in claim 61, wherein the aqueous solution of hydrogen peroxide from which the hydrogen peroxide/water vapour is produced comprises 15% hydrogen peroxide, 0.5% peracetic acid and a balance of water.

63. **(Previously Presented)** The method as claimed in claim 51, further comprising removing the hydrogen peroxide by circulating the atmosphere containing the hydrogen peroxide/water vapour over a catalyst.

64. **(Previously Presented)** The method as claimed in claim 51, further comprising removing the hydrogen peroxide from the enclosed space by using a heating/ventilation air conditioning system communicating with the enclosed space.

65.     (**Previously Presented**) The method as claimed in claim 51, further comprising:  
    forming a plurality of separate recirculating heated airstreams within the enclosed  
space; and

    progressively introducing the hydrogen peroxide/water vapour into each of the  
plurality of separate recirculating heated airstreams, the steps of forming a plurality of  
separate recirculating heated airstreams and progressively introducing the hydrogen  
peroxide/water vapour into each of plurality of separate heated airstreams being performed by  
apparatuses that are disposed within the enclosed space.

66.     (**Previously Presented**) The method as claimed in claim 51, further comprising  
controlling the steps of creating a recirculating heated airstream and progressively introducing the  
hydrogen peroxide/water vapour from outside the enclosed space.

67.     (**Previously Presented**) The method as claimed in claim 51, further comprising  
dehumidifying the atmosphere within the enclosed space to reduce the relative humidity thereof to a  
predetermined level prior to progressively introducing the hydrogen peroxide/water vapour into the  
recirculating heated airstream.

68.     (**Previously Presented**) The method as claimed in claim 67, further comprising using  
an air conditioning system to dehumidify the atmosphere within the enclosed space.

69.     (**Previously Presented**) The method as claimed in claim 51, wherein the steps of  
creating a recirculating heated airstream and progressively introducing hydrogen peroxide/water  
vapour into the recirculating heated airstream are performed by a portable apparatus in the enclosed  
space having a duct with a fan for delivering air through the duct, a filter for filtering air entering the  
duct, a heater for heating air passing through the duct and means for delivering hydrogen  
peroxide/water vapour to the air passing through the duct and a nozzle for delivery of air carrying  
hydrogen peroxide/ water vapour from the duct, the nozzle being rotated universally to distribute the  
hydrogen peroxide/water vapour throughout the enclosed space, circulation of air carrying the  
hydrogen peroxide/water vapour through the duct causing decontamination of the duct.

70. **(Currently Amended)** A method of decontaminating an enclosed space, the method comprising the steps of:

positioning a portable decontamination apparatus within an enclosed space having an atmosphere, the decontamination apparatus including a structure at least partially bounding a compartment, the structure having a plurality of spaced apart openings that communicate between the compartment and the atmosphere within the enclosed space, a flash evaporator chamber being disposed within the compartment of the structure, the flash evaporator chamber having an exterior surface that is freely exposed to the atmosphere within the enclosed space by way of the plurality of spaced apart openings;

activating a portable the decontamination apparatus positioned within an enclosed space so that the decontamination apparatus performs the following functions within the enclosed space:

- (i) continuously drawing air from [[an]] the atmosphere within the enclosed space to form an air stream within the decontamination apparatus;
- (ii) heating the airstream within the decontamination apparatus;
- (iii) flash evaporating within the decontamination apparatus flash evaporator chamber an aqueous solution of hydrogen peroxide to form a hydrogen peroxide/water vapour;
- (iv) introducing the hydrogen peroxide/water vapour into the heated air stream; and
- (v) emitting the heated air stream containing the hydrogen peroxide/water vapour from the decontamination apparatus and into the atmosphere of the enclosed space; and

operating the decontamination apparatus positioned within the enclosed space until the atmosphere within the enclosed space reaches a dew point that causes the hydrogen peroxide/water vapour within the atmosphere to simultaneously and continuously condense onto substantially all exposed surfaces bounding or within the enclosed space so as to decontaminate the surfaces, the hydrogen peroxide/water vapour passing through the plurality of openings of the structure to condense on the exterior surface of the flash evaporation chamber.

71. **(Previously Presented)** The method as recited in claim 70, further comprising passing the air through a filter as the air is drawn from the atmosphere into the decontamination apparatus.

72. **(Previously Presented)** The method as recited in claim 70, wherein the step of emitting the heated air stream comprises passing the heated air stream out of the decontamination apparatus through a rotating nozzle.

73. **(Withdrawn)** The method as claimed in claim 70, wherein the hydrogen peroxide/water vapour further comprises peracetic acid.

74. **(Previously Presented)** The method as claimed in claim 70, further comprising activating a plurality of the portable decontamination apparatus positioned within the enclosed space.

75. **(Previously Presented)** The method as claimed in claim 70, further comprising:  
measuring the condensation of the hydrogen peroxide/water vapour on the surfaces;  
and  
terminating the step of introducing hydrogen peroxide/water vapour into the heated airstream when the measured condensation has reached a predefined level.

76. **(Previously Presented)** The method as claimed in claim 70, further comprising removing the hydrogen peroxide from the enclosed space after the surfaces have been decontaminated.

77. **(Previously Presented)** The method as claimed in claim 76, further comprising removing the portable decontamination apparatus from the enclosed space after the hydrogen peroxide is removed from the enclosed space.

78.     (**Previously Presented**) The method as claimed in claim 70, further comprising positioning the portable decontamination apparatus within a room, the walls of the room bounding the enclosed space.

79.     (**Previously Presented**) The method as claimed in claim 51, wherein the hydrogen peroxide/water vapour uniformly condenses on all of the surfaces within the enclosed space.

80.     (**Previously Presented**) The method as claimed in claim 70, wherein the hydrogen peroxide/water vapour uniformly condenses on all of the surfaces within the enclosed space.

81.     (**New**) The method as claimed in claim 51, wherein the structure includes a front side and an opposing back side, each having at least one of the openings formed therethrough, the hydrogen peroxide/water vapour passing through the openings of the front and back sides of the structure to condense on the exterior surface of the flash evaporation chamber.

82.     (**New**) The method as claimed in claim 81, wherein the structure also includes opposing lateral sides extending between the front and back sides, the lateral sides each having at least one of the openings formed therethrough, the hydrogen peroxide/water vapour also passing through the openings of the lateral sides of the structure to condense on the exterior surface of the flash evaporation chamber.

83.     (**New**) The method as claimed in claim 51,

wherein a conduit, a fan, and a container holding hydrogen peroxide are disposed within the compartment of the structure and each has an exterior surface that is freely exposed to the atmosphere within the enclosed space by way of the plurality of spaced apart openings, and

wherein progressively introducing hydrogen peroxide/water vapour into the recirculating heated airstream causes the hydrogen peroxide/water vapour to pass through the plurality of openings of the structure to condense on the exterior surfaces of the conduit, the fan, and the container.

84. **(New)** The method as claimed in claim 51,  
wherein a control box for controlling operation of the apparatus is disposed within the compartment of the structure, the control box having an exterior surface that is freely exposed to the atmosphere within the enclosed space by way of the plurality of spaced apart openings, and  
wherein progressively introducing hydrogen peroxide/water vapour into the recirculating heated airstream causes the hydrogen peroxide/water vapour to pass through the plurality of openings of the structure to condense on the exterior surface of the control box.
85. **(New)** The method as claimed in claim 84,  
wherein the control box bounds an enclosed interior space and includes means for delivering the heated airstream through the interior space, and  
wherein progressively introducing hydrogen peroxide/water vapour into the recirculating heated airstream causes the hydrogen peroxide/water vapour to pass through the control box by way of the means for delivering the heated airstream to condense on interior surfaces of the control box.
86. **(New)** The method as recited in claim 70,  
wherein the structure includes a front side and an opposing back side, each having an opening formed therethrough, and  
wherein operating the decontamination apparatus causes the hydrogen peroxide/water vapour to pass through the openings of the front and back sides of the structure and condense on the exterior surface of the flash evaporation chamber.
87. **(New)** The method as recited in claim 86,  
wherein the structure also includes opposing lateral sides extending between the front and back sides, the lateral sides each having an opening formed therethrough, and  
wherein operating the decontamination apparatus also causes the hydrogen peroxide/water vapour to pass through the openings of the lateral sides of the structure and condense on the exterior surface of the flash evaporation chamber.

88. **(New)** The method as claimed in claim 70,  
wherein a conduit, a fan, and a container holding hydrogen peroxide are disposed within the compartment of the structure and each has an exterior surface that is freely exposed to the atmosphere within the enclosed space by way of the plurality of spaced apart openings, and  
wherein operating the decontamination apparatus causes the hydrogen peroxide/water vapour to pass through the plurality of openings of the structure to condense on the exterior surfaces of the conduit, the fan, and the container.
89. **(New)** The method as claimed in claim 70,  
wherein a control box for controlling operation of the apparatus is disposed within the compartment of the structure, the control box having an exterior surface that is freely exposed to the atmosphere within the enclosed space within the enclosed space by way of the plurality of spaced apart openings, and  
wherein operating the decontamination apparatus causes the hydrogen peroxide/water vapour to pass through the plurality of openings of the structure to condense on the exterior surface of the control box.
90. **(New)** The method as claimed in claim 89,  
wherein the control box bounds an enclosed interior space and includes means for delivering the heated airstream through the interior space, and  
wherein operating the decontamination apparatus causes the hydrogen peroxide/water vapour to pass through the control box by way of the means for delivering the heated airstream and condense on interior surfaces of the control box.